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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/892,577  
Filing Date: June 28, 2001  
Appellant(s): SAKAI ET AL.

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J. Derek Mason  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 9, 2006 appealing from the Office action mailed on December 13, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,961,990	DELRIEU et al.	10-1999
5,089,269	NODA et al.	02-1992

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3,932,609	ROSENTRIECH et al.	01-1976
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5,726,138	TSAUR et al.	03-1998
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The picture submitted with appeal brief on May 9, 2006 had been considered by the examiner during a personal interview with appellants' attorney and representative on March 9, 2006.

### **(9) Grounds of Rejection**

It is noted that the obviousness rejection statement on final Office action dated December 13, 2005, page 2 inadvertently cites 35 U.S.C. § 102 (b). The error is corrected in this examiner's answer, as the heading, content, and conclusion of the rejection was under 35 U.S.C. § 103 (a), and during the personal interview with appellants' attorney and representative on March 9, 2006, all parties understood that the rejection was made under § 103(a).

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 33-43, 46-49, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delrieu et al. (US 5961990) ("Delrieu") in view of Noda et al. (US 5089269) in view of Noda et al. (US 5089269) ("Noda") and Rosentreich et al. (US 3932609) ("Rosentriech").**

The present claims are product-by-process claims. The court in In re Thorpe held, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of

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a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” See 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (Citations omitted). The court in In re Brown also held, “when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable.” See 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). The requirement for the physical property limitation of the composition here means that the prior art composition should comprise hydrogel particles comprising a non-crosslinked hydrogel having an oil component dispersed therein, wherein the hydrogel particles are dispersed in an aqueous medium. The limitations in the dependent claims that are directed to the physical properties of the hydrogel particles, such as droplet shape and size, breaking intensity, ratio of longest/shortest diameters, etc. will be also considered. See instant claims 37, 39-49. However, the limitation on the process of making the claimed hydrogel-containing composition as recited in the base claim, Claim 33, is directed to the process of making the composition which is viewed not patentably distinct from the prior art cited herein. Although examiner has not given weight to the process limitations in Claims 33-36, and 38, the prior art method of making hydrogel particles is discussed below.

Delrieu teaches agar gel beads of an average diameter of 2 mm comprising lipophilic beta-carotene dispersed in water. See Example 7; instant claims 33, 39, 40,

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and 46. The reference teaches that the particles are formed by injecting the agar solution/beta-carotene mixture through a needle into liquid paraffin oil at 5 °C, a temperature below the agar gelling point. See instant claim 38. See col. 4, line 62 – col. 5, line 18 for the method of making the beads. The resulting agar beads are then incorporated into cosmetic compositions such as creams, gels and lotions (an aqueous composition). See col. 16, lines 53 – 58; instant claim 49. While the applications of vibration to the apparatus as recited in instant claims 34-36 are process limitations, it is nevertheless noted that Delrieu teaches to control the size of the beads by agitation of the oil bath. Col. 13, line 65 – col. 14, line 6; Example 10. See instant claims 33, 34-36. The reference teaches restraining polymers that are dispersed in the agar gel, which is viewed as polymer emulsifying-dispersing agents, which include quaternized polysaccharides. See col. 4, lines 6 – 20; col. 8, line 18 – col. 10, line 5. See instant claims 41 and 43. The reference teaches that at least 80 % of the particles are within the desired average particle size range of 0.05-10 mm. See col. 5, lines 42 – 59.

As for claims 47 and 48, it is well settled in patent law that if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present since a chemical composition and its properties are inseparable.

See In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, the prior art agar beads that meet the claimed limitations of instant claim 33 necessarily has the same breaking intensity and gel strength of the gel bead as recited in claims 47 and 48, respectively. See also col. 13, lines 7 – 26 which teaches that the

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hardness of the gel beads are controlled so that the beads are soft and crushable upon contact with the skin.

Delrieu fails to teach the viscosity and the specific gravity of the aqueous medium of the composition.

Noda teaches skin cosmetics such as lotions which contain oily components and emulsifiers enclosed in gelatin microcapsules in the aqueous phase. See Examples 3-1 through 3-7. The gelatin capsules in Noda are considered to be "non-crosslinked hydrogel" as applicants define in instant specification p. 5, lines 21 – p. 6, line 1, since the gel in Noda is formed by dissolving the gelatin in heated water and cooling. See Noda, Example 3-1. See also col. 8, lines 45 – 51 for suitable water-soluble polymers including agar. Noda further teaches that the viscosity of the compositions ranges from 1,000 to 20,000 cps (1000 – 20,000 mPa.s), which is within the claimed range in the instant claim 17. See col. 5, lines 56 – 63. While the reference lacks the teaching of the specific gravity of the composition, it teaches of a surfactant solution containing capsules with improved dispersity by adjustment of the specific gravity. See col. 3, lines 40 – 45. Based on this disclosure in Noda, examiner views that a routineer would have discovered the optimal range of the specific gravity of the aqueous medium of the instant invention by routine experimentation.

Rosentreich et al. teach stable antiperspirant liquid compositions. The reference teaches the preferred viscosity range for the lotion formulation is 500-2225 cps (500-2225 mPa.s) at ambient temperature, while the specific gravity is 1.100-1.400. See col. 4, lines 21 – 29.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of Delrieu by adjusting the viscosity and specific gravity of the aqueous medium of the composition as motivated by Noda and Rosentreich because 1) Noda teaches the acceptable viscosity range of a cosmetic such as lotion which contains agar beads; and further teaches that adjust specific gravity of a solution can improve the dispersity of capsules in the composition; 2) Rosentreich teach the preferred viscosity and specific gravity for an aqueous lotion composition. The skilled artisan would have had a reasonable expectation of successfully producing a cosmetic composition having topically acceptable viscosity and good dispersity of the agar beads by combining the teachings of the references.

**Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delrieu, Noda, and Rosentreich as applied to claims 33-43, 46-49, and 51 as above, and further in view of Tsaor et al. (US 5726138).**

While Delrieu, discussed above, teaches dermatological actives suitable for the invention in col. 10, lines 6 – col. 11, line 11, the reference fails to teach solid fatty actives or ceramides.

Tsaor discloses aqueous compositions comprising hydrogel particles comprising water-insoluble skin benefit ingredients entrapped therein. See col. 2, line 63 – col. 3, line 60. Tsaor teaches that the suitable benefit agents include specific waxes, hydrocarbons, cholesterol ester ceramides, and pseudoceramides. See col. 8, lines 5 – 58; Examples 8-10; see instant claims 44 and 45. These actives are taught to provide protection, moisture or conditioning effect to the skin. See *Id.* The reference teaches

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that the benefit agent is dispersed in the hydrogel-forming polymers before the formation into hydrogel particles. See col. 4, lines 28 – 44; instant claim 41. Using surfactants in mixing the benefit agent and the hydrogel-forming polymer solution is also disclosed in col. 9, lines 6 – 24. See instant claim 41. The reference teaches using acrylic polymers such as modified polysaccharides, cationic modified cellulose, Carbopol by B.F. Goodrich, polyvinyl alcohol, which meet the “polymer emulsifying or dispersing agent” limitation of instant claim 43. See col. 7, lines 48-65. It is also noted that modified polysaccharides and cationic modified cellulose are used in Delrieu as restraining polymers. The reference teaches an aqueous lotion composition with petrolatum, a solid fatty substance with m.p. 38-60°C, contained in a hydrogel particle comprising chitosan, a non-crosslinked, thermal gelatin. See Example 15; instant claims 42, 44, and 49. The diameter of the petrolatum hydrogel particles there is deemed to be 200 microns. See instant claim 37. Tsaur teaches using two types of polymers to form hydrogel, wherein the first polymer may be thermal gelatin, such as agar or gelatins; and the second polymer is selected depending on the desired gel strength. See col. 5, line 56 – col. 6, line 22; instant claim 47. The reference further teaches that the gel strength can be manipulated by controlling the amounts of the two polymers and the particle size. See col. 7, lines 33 – 40; col. 17, lines 44 – 57; instant claim 47.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions comprising agar beads of Delrieu by substituting the actives with the Tsaur wax or ceramides along with

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surfactants, as motivated by the collective teachings of the references, because 1) Delrieu teaches using dermatologically active substances to provide prophylactic and treatment effect to the skin; and 2) Tsaur teaches that the disclosed benefit agents therein can protect, moisturize or condition the skin after being deposited from the aqueous composition.

The skilled artisan would have had a reasonable expectation of successfully producing a cosmetic composition which provides the controlled-release of the cosmetic wax or ceramide active ingredients because both Delrieu and Tsaur are teach hydrogel particles comprising oily active ingredients dispersed therein which are then incorporated into aqueous medium.

#### **(10) Response to Argument**

As noted above in (7) Ground of Rejection, the present rejection is made under 35 U.S.C. § 103(a). Examiner asserts that a prima facie of obviousness has been established in this case.

Appellants assert that Noda and Rosentriech fail to provide motivation for one of ordinary skill in the art to arrive at a viscosity and specific gravity for the aqueous medium of the present invention and use that in the composition of Delrieu to arrive at the present invention composition.

Appellants argue that Noda is limited to the teaching of microcapsules which is excluded from the appellants' definition of hydrogel particles, and that the viscosity of the Noda composition does not 'necessarily' indicate the viscosity of Delrieu composition. Appellants also assert that the viscosity of the Rosentreich composition

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should not be considered because the composition lacks hydrogel particles. In response, it is respectfully noted that Noda and Rosentriech are cited for the teaching that the viscosity of the appellants' aqueous medium is within the range of conventional aqueous cosmetic compositions. For example, Noda teaches a cosmetic composition having a gel-like aqueous phase having 3000 cps (3000 mPa.s). See col. 22, lines 50-52. Rosentriech et al. also teaches that a conventional cosmetic lotion has a viscosity of 500-2225 cps (500-2226 mPa.s) and a specific gravity of 1.1 – 1.4 at ambient temperature. Examiner is well aware that the Rosentriech composition does not contain hydrogel particles, however, appellants' claim limitations on viscosity and specific gravity do not bear any criticality either. Examiner asserts that the rejection should be maintained because the viscosity and the specific gravity limitation of the appellants' composition is in an obvious range, and appellants have not shown any unexpected results in formulating appellants' compositions within this conventional viscosity range for aqueous cosmetic compositions.

Regarding claims 34-36, appellants assert that the Delrieu reference fails to teach the process limitation of the vibration applied to the orifice, the dispersion or emulsion itself, or the liquid column being discharged from the orifice. Examiner asserts that the process limitation is given patentable weight only when the limitation renders the structural limitation to the claimed product. See In re Thorpe. While Delrieu teaches that the agitation of the oil bath is applied in the prior art process in order to control the size of the hydrogel particles, appellants have also admitted that the claimed process limitation is applied "to control shape and/or uniformity of the particles", which is

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no different from the prior art method. It is viewed that both the prior art method and the claimed method would obviously produce hydrogel particles with uniform size.

Regarding claim 51, appellants assert that the teaching of Noda with respect to "improved dispersibility" is not relevant in the present case. Appellants specifically argue that dispersibility refers to ease of making into a dispersion, rather than stably dispersing particles within a composition. In response, examiner asserts that one of ordinary skill in the art would not have interpreted the teaching of the reference as appellants have. Examiner views that the "dispersibility" of the prior art composition also refers to the dispersion of the particles within the composition. Nevertheless, the obviousness rejection is properly made because the rejection is made in view of the combined teachings of the references, and Rosentriech teaches the specific gravity limitation as claimed by appellants.

Appellants' arguments regarding claims 44 and 45 are moot, as these depend on the validity of the previous arguments. Examiner asserts that the obviousness rejection has been properly made in this case because 1) Delrieu teaches a similar aqueous composition comprising hydrogel particle as claimed by appellants; 2) the process limitations of the present claims do not render any patentable distinction to the product claimed; and 3) the viscosity and specific gravity of the aqueous phase as claimed by appellants are also within the range of conventional aqueous cosmetic compositions.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

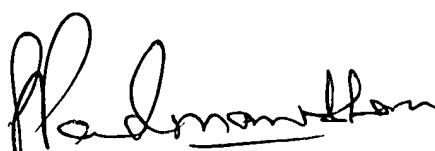
Respectfully submitted,

Gina Yu



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